



Handläggande organ	Fastställt	Utgåva	Sida
SVENSK MATERIAL- & MEKANSTANDARD, SMS	1999-12-03	1	1 (1+11)

© Copyright SIS. Reproduction in any form without permission is prohibited.

Technical drawings – General principles of presentation – Part 25: Lines in shipbuilding drawings

The International Standard ISO 128-25:1999 has the status of a Swedish Standard. This document contains the official English version of ISO 128-25:1999.

Swedish Standards corresponding to documents referred to in this Standard are listed in "Catalogue of Swedish Standards", issued by SIS. The Catalogue lists, with reference number and year of Swedish approval, International and European Standards approved as Swedish Standards as well as other Swedish Standards.

Ritregler – Allmänna regler – Del 25: Linjer för varvsritningar

Den internationella standarden ISO 128-25:1999 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av ISO 128-25:1999.

Motsvarigheten och aktualiteten i svensk standard till de publikationer som omnämns i denna standard framgår av "Katalog över svensk standard", som ges ut av SIS. I katalogen redovisas internationella och europeiska standarder som fastställts som svenska standarder och övriga gällande svenska standarder.

ICS 01.100.20; 47.020.01

ISO 128-25:1999(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 128-25 was prepared by the Technical Committee ISO/TC 10, *Technical drawings, product definition and related documentation*, Subcommittee SC 1, *Basic conventions*.

ISO 128 consists of the following parts, under the general title *Technical drawings — General principles of presentation*:

- *Part 20: Basic conventions for lines*
- *Part 21: Preparation of lines by CAD systems*
- *Part 22: Basic conventions and applications for leader lines and reference lines*
- *Part 23: Lines on construction drawings*
- *Part 24: Lines on mechanical engineering drawings*
- *Part 25: Lines on shipbuilding drawings*
- *Part 30: Basic conventions for views*
- *Part 40: Basic conventions for cuts and sections*
- *Part 41: Cuts and sections for mechanical engineering drawings*
- *Part 50: Basic conventions for representing areas on cuts and sections*
- *Part 60: Additional conventions for views, cuts and sections*

Annex A of this part of ISO 128 is for information only

© ISO 1999

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet iso@iso.ch

Printed in Switzerland

Technical drawings — General principles of presentation —

Part 25: Lines on shipbuilding drawings

1 Scope

This part of ISO 128 specifies application rules and basic conventions for the types of lines on shipbuilding drawings.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 128. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 128 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 128-20:1996, *Technical drawings — General principles of presentation — Part 20: Basic conventions for lines*.

ISO 6428:1982, *Technical drawings — Requirements for microcopying*.

3 General principles

The basic types of lines, their designations and dimensions as well as general rules for draughting of lines are specified in ISO 128-20.

The requirements for microcopying are specified in ISO 6428.

4 Types of lines and their application

The different types of lines and their application are described in Table 1.

The first part of the line number in Table 1 corresponds to the basic type number, in accordance with ISO 128-20.

Table 1 — Types of lines and their application

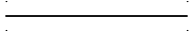

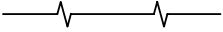
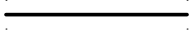
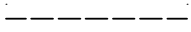
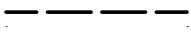
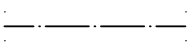
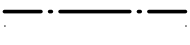


No.	Line Description and representation	Application	Examples, see figure
01.1	Continuous narrow line 	.1 visible edges	A.2
		.2 seams and butts	A.18, A.20
		.3 visible profiles	A.1, A.6
	Continuous narrow undulating line 	.4 preferably freehand-drawn boundaries of partial or interrupted views and sections, if the boundary is not a line of symmetry or a centreline ^a	A.1
	Continuous narrow line with zigzags 	.5 preferably computer-drawn boundaries of partial or interrupted views and sections, if the boundary is not a line of symmetry or a centreline ^a	A.2
01.2	Continuous wide line 	Sections of structural members, for example	
		.1 outer plating	A.2, A.19, A.20
		.2 decks	A.6
		.3 inner bottoms	A.19
		.4 bulkheads and walls	A.20
		.5 bottom girders and floors	A.19
		.6 transverse girders, longitudinal girders	A.4
		.7 stringers	—
		.8 web frames	A.2
		.9 brackets	A.6
.10 profiles	A.19		
02.1	Dashed narrow line 	.1 hidden edges	A.2
		.2 hidden profiles	A.1, A.2, A.6, A.18, A.20
02.2	Dashed wide line 	Hidden plates, for example	
		.1 decks	A.18
		.2 inner bottoms	A.18
		.3 walls and bulkheads ^b	A.18, A.20
		.4 bottom girders	A.18
		.5 floors	A.18
.6 brackets	A.6		

Table 1 (continued)

No.	Line Description and representation	Application	Examples, see figure
04.1	Long-dashed dotted narrow line 	.1 veed-out openings	A.18, A.20
		.2 intersections, knuckles, centrelines	A.16, A.17
04.2	Long-dashed dotted wide line 	Hidden plates, for example	
		.1 deck girders	A.20
		.2 web frames	A.2, A.18
05.1	Long-dashed double-dotted narrow line 	.3 transverse webs, stringers	A.20
		.1 outlines of adjacent parts	A.18
		.2 parts situated in front of or behind the cutting plane	—
01+03	Railway line 	.1 hidden plates, e.g. tight walls or bulkheads ^b	A.20

^a It is recommended to use only one type of line on one drawing.
^b The decision to use the type of line 02.2.3 or 01+03 is left to the shipyard.

Examples of applications are given in annex A.

5 Line widths and line groups

Two line widths are normally used on shipbuilding drawings. The proportions between the line widths should be not smaller than 1:2. A proportion of 1:3 is also allowed.

The line groups are specified in Table 2.

Table 2 — Line groups

Dimensions in millimetres

Line group	Line widths for line No.		
	01.2 - 02.2 - 04.2	01.1 - 02.1 - 04.1 - 05.1	01+03
0,5	0,5	0,25	1,0
0,7	0,7	0,35	
1,0	1,0	0,5	

The widths and groups of lines should be chosen according to the type, size and scale of the drawing and according to the requirements for microcopying and/or other methods of reproduction.

Annex A (informative)

Application examples

Table A.1 gives examples of the application of the different types of lines indicating the reference number given in Table 1.

Table A.1 — Application examples

Figure	Representation	Explanation, remarks
A.1	<p>Profiles on panels, general</p>	<p>Representation in walls, decks, etc.</p> <p>The actual shape of the profile section used may also be represented.</p> <p>Designation of profile sections shall be in accordance with ISO 5261.</p>
A.2	<p>Continuous profile sections crossing with girders</p>	
A.3	<p>Welded ends of profiles</p>	<p>Welded ends of profile sections shall be marked by arrows.</p> <p>When such profile ends are represented in both top view and projection, arrows may be dispensed within one view.</p> <p>For identification of the lines, see Figure A.2.</p>